

WHAT IS CLAIMED IS:

1. An implantable medical device having enhanced radiopacity, comprising:
a structural body formed from a biocompatible material having a certain level of radiopacity, the structural body including at least one marker holder integrally formed therein; and
a radiopaque marker made from a material having a level of radiopacity greater than the level of radiopacity of the biocompatible material from which the structural body is formed, the radiopaque marker being attachable within the marker holder, wherein the marker holder includes a pair of projecting fingers which define an opening and the radiopaque marker includes a region which fits within the opening defined by the projecting fingers.
2. The implantable medical device of claim 1, wherein the radiopaque marker is attached to the projecting fingers of the marker holder by a heat weld.
3. The implantable medical device of claim 1, wherein the projecting fingers are connected at a notched region which allows the projecting fingers to move laterally to accept the radiopaque marker.
4. The implantable medical device of claim 3, wherein the radiopaque marker has a region which fits within the opening defined by the projecting fingers of the marker holder and the radiopaque marker and projecting fingers are bonded together by a heat weld.

5. The implantable medical device of claim 1, wherein the opening defined by the projecting fingers of the marker holder is substantially V-shaped and the region formed on the radiopaque marker to fit within the opening is substantially V-shaped.

6. The implantable medical device of claim 2, wherein the V- shaped opening defined by the projecting fingers defines a particular angle and the V-shaped region of the radiopaque marker defines an angle which is larger than the angle of the V-shaped opening.

7. The implantable medical device of claim 3, wherein the radiopaque marker has a region adapted to fit within the opening defined by the projecting finger that is larger than the opening defined by the projecting finger.

8. An implantable medical device having enhanced radiopacity, comprising:

a structural body formed from a superelastic alloy having a certain level of radiopacity, the structural body including at least one marker holder; and

a radiopaque marker made from a nickel-titanium alloy including a ternary element which attains a level of radiopacity greater than the level of radiopacity of the superelastic alloy from which the structural body is formed, the radiopaque marker being attachable within the marker holder.

9. The implantable medical device of claim 8, wherein the ternary element is selected from the group of elements consisting of iridium, platinum, gold, rhenium, tungsten, palladium, rhodium, tantalum, silver, ruthenium, and hafnium.

10. The implantable medical device of claim 8, wherein the ternary element is platinum and the atomic percent of platinum is greater than or equal to 2.5 and less than or equal to 15.

11. The implantable medical device of claim 8, wherein the superelastic alloy is nickel-titanium alloy.

12. The implantable medical device of claim 11, wherein the structural body includes a plurality of marker holders integrally formed with the structural body and the medical device includes a plurality of radiopaque markers attachable to the marker holders.

13. The implantable medical device of claim 11, wherein the radiopaque marker is attached to the marker holder by melting.

14. The implantable medical device of claim 8, wherein the radiopaque marker is attached to the marker holder by a heat weld.

15. The implantable medical device of claim 8, wherein the structural body is a stent.

16. The implantable medical device of claim 8, wherein the marker holder includes a pair of projecting fingers which creates an opening and the radiopaque marker includes a region which fits within the opening defined by the projecting fingers.

17. The implantable medical device of claim 16, wherein the radiopaque marker is attached to the projecting fingers of the marker holder by a heat weld.

18. The implantable medical device of claim 16, wherein the projecting fingers are connected at a notched region which allows the projecting fingers to move laterally to accept the radiopaque marker.

19. The implantable medical device of claim 18, wherein the radiopaque marker has a region which fits within the opening defined by the projecting fingers of the marker holder and is attached thereto by a heat weld.

20. The implantable medical device of claim 19, wherein the opening defined by the projecting fingers of the marker holder is substantially V-shaped and the region formed on the radiopaque marker to fit within the opening is substantially V-shaped.

21. The implantable medical device of claim 20, wherein the V- shaped opening defined by the projecting fingers defines a particular angle and the V-shaped region of the radiopaque marker defines an angle which is larger than the angle of the V-shaped opening.

22. The implantable medical device of claim 21, wherein the radiopaque marker is attached to the projecting fingers of the marker holder by a heat weld

23. An implantable medical device having enhanced radiopacity, comprising:

a structural body formed from a biocompatible material having a certain level of radiopacity, the structural body including at least one marker holder; and

a radiopaque marker having a level of radiopacity greater than the level of radiopacity of the biocompatible material making up the structural body, the radiopaque marker including a core at least partially encapsulated by an outer layer, the material forming the core having a level of radiopacity greater than the level of radiopacity of the material forming the structural body, the radiopaque marker being adapted to fit within the marker holder.

24. The implantable medical device of claim 23, wherein a heat weld is utilized to melt a portion of the marker holder and a portion of the outer layer of the radiopaque marker to form a bond.

25. The implantable medical device of claim 23, wherein the biocompatible material forming the structural body and the outer layer of the radiopaque marker is a nickel-titanium alloy and the material forming the core of the radiopaque marker is selected from the group consisting of gold, gold alloys, platinum, platinum alloys, tantalum, tantalum alloys, and other materials having levels of radiopacity higher than the nickel-titanium alloy used to form the structural body.

26. The implantable medical device of claim 23 wherein the same biocompatible material is used to form the structural body and the outer layer of radiopaque marker.

27. The implantable medical device of claim 24, wherein the outer layer of the radiopaque marker is sufficiently thick to prevent the inner core from melting when the heat weld is applied.

28. The implantable medical device of claim 27, wherein the marker holder has an opening which receives the radiopaque marker.

29. An implantable medical device having enhanced radiopacity, comprising:

a structural body formed from a shape memory alloy and having a certain level of radiopacity, the structural body including at least one marker holder which includes an opening formed therein; and

a radiopaque marker having a level of radiopacity greater than the level of radiopacity of the shape memory alloy, the radiopaque marker having a shape to at least partially fit within the opening of the marked holder, wherein the marker holder has a first configuration at a particular temperature and a second configuration at a different temperature and the radiopaque marker is adapted to be placed into the opening of the marker holder when the marker holder is in the first configuration while the medical device is implantable when the marker holder is placed in the second configuration.

30. The implantable medical device of claim 29, wherein the shape memory alloy is nickel-titanium.

31. The implantable medical device of claim 30, wherein the opening of the marker holder has a smaller shape in either the first or second configuration.

32. The implantable medical device of claim 4, wherein the region of the radiopaque marker which fits within the opening defined by the projecting fingers of the marker holder is slightly larger than the opening.

33. The implantable medical device of claim 4, wherein the opening defined by the projecting fingers has a particular shape and the region of the radiopaque marker which fits within the opening is slightly larger than the opening.